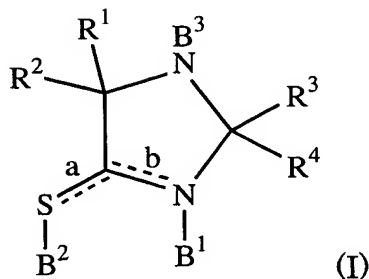


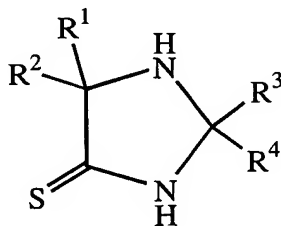
## Claims

1. A method for making a compound of formula (I)



wherein bonds a and b are single or double bonds, provided that one of a and b is a single bond and the other is a double bond; one of B<sup>1</sup> and B<sup>2</sup> is  $\text{--CHR}^5\text{--CHR}^6\text{--C(Y)ZR}^7$  or hydrogen and the other is absent; B<sup>3</sup> is  $\text{--C(W)NHR}^8$  or hydrogen; provided that one of B<sup>1</sup>, B<sup>2</sup> and B<sup>3</sup> is not hydrogen; R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are independently hydrogen, alkyl, alkenyl, aryl or aralkyl; or R<sup>1</sup> and R<sup>2</sup>, or R<sup>3</sup> and R<sup>4</sup>, combine with the carbon atom to which they are attached to form an alkyl or alkenyl ring; provided that at least three of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are alkyl, alkenyl, aryl or aralkyl; Y and W are O or S; Z is O, S or NR<sup>9</sup>; R<sup>5</sup> is hydrogen or C<sub>1</sub>-C<sub>4</sub> alkyl; R<sup>6</sup> is hydrogen or C<sub>1</sub>-C<sub>4</sub> alkyl; R<sup>7</sup> and R<sup>9</sup> are independently hydrogen, alkyl, alkenyl, aryl or aralkyl; and R<sup>8</sup> is alkyl, alkenyl, aryl or aralkyl;

said method comprising adding to an imidazolidinethione having formula

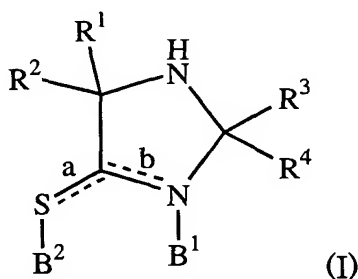


one of: (i)  $\text{CHR}^5\text{=CHR}^6\text{--C(Y)ZR}^7$ ; and (ii)  $\text{R}^8\text{N=C=W}$  to form a reaction mixture; wherein the reaction mixture is substantially free of solvent.

2. The method of claim 1 in which  $\text{CHR}^5=\text{CHR}^6\text{-C(O)OR}^7$  is added to the imidazolidinethione;  $\text{R}^5$  is hydrogen; and  $\text{R}^6$  is hydrogen or methyl.

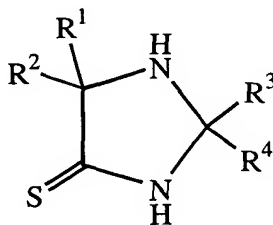
3. The method of claim 2 further comprising an alkali metal carbonate in an amount less than 10 mole % relative to  $\text{CHR}^5=\text{CHR}^6\text{-C(O)OR}^7$ .

4. A method for making a compound of formula (I)



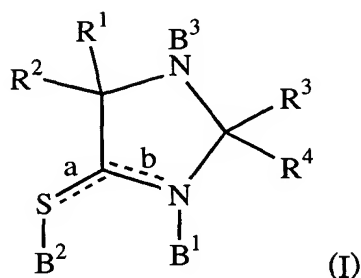
wherein bonds a and b are single or double bonds, provided that one of a and b is a single bond and the other is a double bond; one of  $\text{B}^1$  and  $\text{B}^2$  is  $-\text{CR}^{10}\text{R}^{11}\text{-NHR}^{12}$  and the other is absent;  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^3$  and  $\text{R}^4$  are independently hydrogen, alkyl, alkenyl, aryl or aralkyl; or  $\text{R}^1$  and  $\text{R}^2$ , or  $\text{R}^3$  and  $\text{R}^4$ , combine with the carbon atom to which they are attached to form an alkyl or alkenyl ring; provided that at least three of  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^3$  and  $\text{R}^4$  are alkyl, alkenyl, aryl or aralkyl;  $\text{R}^{10}$  and  $\text{R}^{11}$  independently are hydrogen, alkyl, alkenyl, aryl or aralkyl; and  $\text{R}^{12}$  is alkyl, alkenyl, aryl or aralkyl;

said method comprising adding  $\text{R}^{10}\text{R}^{11}\text{C=O}$  and  $\text{R}^{12}\text{NH}_2$  to an imidazolidinethione having formula



and heating to a temperature from 50°C to 180°C.

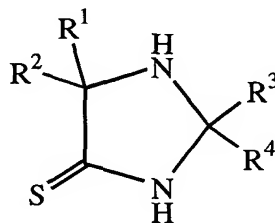
5. A method for making a compound of formula (I)



wherein bonds a and b are single or double bonds, provided that one of a and b is a single bond and the other is a double bond; one of B<sup>1</sup> and B<sup>2</sup> is  $-\text{CHR}^5-\text{CHR}^6-\text{C}(\text{Y})\text{ZR}^7$ ,  $-\text{CR}^{10}\text{R}^{11}-\text{NHR}^{12}$  or hydrogen and the other is absent; B<sup>3</sup> is  $-\text{C}(\text{W})\text{NHR}^8$  or hydrogen; provided that one of B<sup>1</sup>, B<sup>2</sup> and B<sup>3</sup> is not hydrogen; R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are independently hydrogen, alkyl, alkenyl, aryl or aralkyl; or R<sup>1</sup> and R<sup>2</sup>, or R<sup>3</sup> and R<sup>4</sup>, combine with the carbon atom to which they are attached to form an alkyl or alkenyl ring; provided that at least three of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are alkyl, alkenyl, aryl or aralkyl; Y and W are O or S; Z is O, S or NR<sup>9</sup>; R<sup>5</sup> is hydrogen or C<sub>1</sub>-C<sub>4</sub> alkyl; R<sup>6</sup> is hydrogen or C<sub>1</sub>-C<sub>4</sub> alkyl; R<sup>7</sup>, R<sup>9</sup>, R<sup>10</sup> and R<sup>11</sup> are independently hydrogen, alkyl, alkenyl, aryl or aralkyl; and R<sup>8</sup> and R<sup>12</sup> independently are alkyl, alkenyl, aryl or aralkyl;

said method comprising steps of:

- (a) preparing an imidazolidinethione having formula



and (b) adding to the imidazolidinethione, without isolation of the imidazolidinethione, one of: (i)  $\text{CHR}^5=\text{CHR}^6-\text{C}(\text{Y})\text{ZR}^7$ ; (ii)  $\text{R}^{10}\text{R}^{11}\text{C}=\text{O}$  and  $\text{R}^{12}\text{NH}_2$ ; (iii)  $\text{R}^{10}\text{R}^{11}\text{C}=\text{NR}^{12}$ ; and (iv)  $\text{R}^8\text{N}=\text{C}=\text{W}$ .

6. The method of claim 5 in which  $R^{10}R^{11}C=O$  and  $R^{12}NH_2$  are added to the imidazolidinethione.
7. The method of claim 5 in which  $CHR^5=CHR^6-C(O)OR^7$  is added to the imidazolidinethione;  $R^5$  is hydrogen; and  $R^6$  is hydrogen or methyl.
8. The method of claim 5 in which  $R^8N=C=W$  is added to the imidazolidinethione and further comprising removal of substantially all water prior to addition of  $R^8N=C=W$ .
9. The method of claim 8 in which  $W$  is  $O$ , and  $R^8$  is aryl or  $C_8-C_{20}$  alkyl.